A GUIDE ON APPLYING FOR THE APPROVAL OF SEWAGE WORKS

Ministry of the Environment
Ontario

A GUIDE ON APPLYING

FOR THE APPROVAL OF

SEWAGE WORKS

ENVIRONMENTAL APPROVALS SECTION

ENVIRONMENTAL APPROVALS & LAND USE PLANNING BRANCH

MINISTRY OF THE ENVIRONMENT

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NOTE: The printing of this Guide is to facilitate recent demand for the publication and does not reflect recent organizational changes within the Ministry. A revised and updated guide is under preparation. Any questions related to this guide should be addressed to the appropriate Approvals Supervisor.

TABLE OF CONTENTS

A GUIDE ON APPLYING

FOR

THE APPROVAL OF SEWAGE WORKS

PURPOSE OF GUIDE

This guide is intended to assist persons in applying for approval of sewage works systems under Section 42 of The Ontario Water Resources Act. The contents of this guide will describe the types of approvals available, how the application form is to be completed, what supporting information is required and the responsibilities of both the applicant and this Ministry.

The guide touches briefly on some design requirements of this Ministry, but in general other publications must be consulted for detailed design information. The Ministry of the Environment has prepared a number of specifications, guidelines and standards relating to sewage works systems which are available upon request. This information in conjunction with with other manuals of practice prepared by such agencies as W.P.C.F., U.S. Environmental Protection Agency, Great Lakes - Upper Mississippi River Board of State Sanitary Engineers, etc. may be consulted in regard to accepted engineering design practice for sewage works systems.

SYSTEMS REQUIRING APPROVAL

Ministry of the Environment approval must be obtained before construction of sewage works can be undertaken or a by-law is adopted for raising money to finance such works.

This approval requirement is contained in Section 42 of The Ontario Water Resources Act. The approval requirement covers the establishment of new systems, or the extension of or any change in any existing system.

The following definition applies to sewage works under the OWR Act:

> "Sewage works" - means any works for the collection, transmission, treatment and disposal of sewage, or any part of any such works, but does not include plumbing or other works to which regulations made under clause f of subsection 1 of Section 62 apply.

Approval under the OWR Act is not required for the following systems:

(a) a sewage works from which sewage is not to drain or be discharged directly or indirectly into a ditch, drain or storm sewer or a well, lake, river, pond, spring, stream, reservoir, or other water or watercourse;

(b) a privately-owned sewage works designed for the partial treatment of sewage that is to drain or be discharged into a sanitary sewer;

(c) a privately-owned sewage works serving only five or fewer private residences;

(d) a sewage works the main purpose of which is to drain agricultural lands;

(e) a drainage works under The Drainage Act, The Cemeteries Act, The Public Transportation and Highway Improvement Act or The Railway Act;

(f) sewage works as may be exempted therefrom by regulations made under this Act.

All sewage works with the exception of the above and those covered by The Plumbing Code, therefore, require approval by the Ministry of the Environment.

WHEN APPROVAL IS REQUIRED

Sewage systems requiring approval under The OWR Act must be approved prior to construction or prior to adopting by-laws for raising money to finance such works. Approval will be given through the issuance of a certificate of approval upon satisfactory compliance by the applicant with

the policies and requirements of the Ministry of the Environment.

Every municipality that, or person who proceeds with works or the passage of by-laws financing such works without approval of the Ministry is guilty of an offence and is subject to the penalties outlined in Section 42 of The Ontario Water Resources Act.

PUBLIC HEARINGS

Under certain conditions as set out in The Ontario Water Resources Act, a public hearing must be held before granting approval of sewage works, while in others such hearings are optional.

A hearing must be held when one municipality intends to establish or extend sewage works in or into another municipality. If the works are to be constructed within the applicant municipality, after consideration of the proposal the Director may direct the Environmental Assessment Board to hold a hearing. With new sewage treatment works a hearing is normally recommended.

In each case, the Director must give at least ten day's notice of the hearing to the clerk(s) of the municiplity(ies) concerned and to such other persons as the Director may decide.

TYPES OF APPROVALS

Before assembling the necessary information and undertaking extensive engineering studies necessary for a formal application for approval, the applicant or his agents may wish to meet with Ministry staff to discuss the concepts of the proposal and obtain agreement in principle. With minor works, such as the limited extension of existing storm water or sewage collection systems this prior contact with Ministry staff may not be necessary as long as the sewage treatment plant has adequate reserve capacity and the extension will not result in overloading of the water treatment and supply facilities. With major works, however, discussion with Ministry staff and the obtainment of agreement in principle is recommended prior to finalizing designs and making application for approval.

To obtain agreement in principle with a proposal, discussions should first be held with designated staff of the Ministry's Regional Operations Division. These staff members are located throughout the Province in Regional and District Offices. A list of these office locations is included in Appendix A. If agreement in principle with specific design features or treatment methods is desired by the applicant, discussions should also be held with staff of the Water and Wastewater Approvals Unit, Environmental Approvals Branch, 135 St. Clair Ave. West, Toronto, Ontario. On Ministry financed projects, these discussions should be carried out with staff of Design and Equipment Section of the Project Co-ordination Branch, 135 St. Clair Ave. West, Toronto, Ontario.

When the applicant is ready to make a formal submission for approval, three types of approvals can be applied for - preliminary, final or experimental approval.

Preliminary Approval is the Ministry's agreement with the applicant's concept and basis of design, and represents a commitment by the Ministry to give final approval subject only to the receipt of satisfactory final plans and specifications. Preliminary approval is not authorization to begin construction, but allows the applicant to arrange for financing of the works and to obtain the Ministry's concurrence prior to undertaking more extensive engineering work. Preliminary certificates of approval may be requested by the OMB in its consideration of fund expenditures.

It is not a requirement of this Ministry that application be made for preliminary approval of sewage works prior to applying for final approval. The applicant may proceed toward a submission for final approval if he so desires. However, in the case where a public hearing is required, it is advisable to apply for preliminary approval as the results of the hearing may change the design concepts.

The issuance of a preliminary certificate of approval does not fulfill all requirements, and application for final approval must be made when plans and specifications are completed.

Final Approval is granted when an application has met all the requirements of the Ministry. The final approval

certificate implies Ministry approval to commence construction. It should be noted, that other approvals, permits, clearances, etc. may be required from other jurisdictions.

Where in the opinion of the Director, it is in the public interest to do so, the Director may refuse to grant his approval or grant his approval on such terms and conditions he considers necessary.

Experimental Approval is intended to encourage the development of new processes, equipment and materials where reliable operating data from full-scale installations are not available. Experimental approval is given in the form of terms and conditions to a certificate of final approval. To be eligible for experimental approval, the applicant must show that failure of the system will not result in a health hazard or pollution, that the system can be modified to or replaced with a conventional system, and that the necessary capital resources are available to make this modification or replacement.

The risk incurred with experimentation must rest with the proponent of the system. In granting such experimental approval, the Ministry reserves the right to limit the number of approvals for the same system and may require the owner to submit reports on the operation of the system during the experimental period.

AIR EMISSIONS

For any source of air contaminant, i.e. odours, incinerator emissions, etc. or if standby power internal combustion engines are to be provided for any sewage works, the requirement of Section 8 of The Environmental Protection Act must be satisfied. This involves a separate application for "Air" approval.

Ontario Regulation 15, under The Environmental Protection Act, specifies the maximum allowable concentration of air contaminants at the point of impingement. These regulations also specify the dispersion calculations to determine the maximum concentration of a particular contaminant under the least favourable atmospheric conditions taking into account building heights, configuration, etc.

If the isolation distance from the source of air contamination to the nearest residential dwelling, apartment building, restaurant, etc. (considered as the point of impingement) is not sufficient to dissipate the air contaminants to within the regulated levels, a higher exhaust stack or emission control equipment will be required.

METRICATION

As of January 1, 1978, all designs submitted to the Ministry including plans, specifications, reports, design calculations, etc. should be prepared in the International System of Units (SI). The present approach of the Ministry to metrication is presented in the MOE publication entitled "Metrication Guidelines for Consulting Engineers".

INFORMATION REQUIRED FOR PRELIMINARY APPROVAL

If the applicant wishes to apply for preliminary approval, a preliminary report should be prepared. The applicant may request formal preliminary approval by submitting the report along with a duly completed application form.

Without limiting the scope of the preliminary report, it should, where pertinent, present the following information:

1. Brief description of the proposal including a description of the existing sewage treatment facilities.

2. Extent, nature, anticipated population and population densities of contributing areas, facilities proposed to be constructed, and provisions for extending the system to include additional areas.

3. Brief description of alternatives (methods of treatment, site locations, etc.) which have been assessed and the reasons for selecting the ones recommended, including financial considerations.

4. Itemization and discussion of present and future domestic sewage flows, commercial, institutional, industrial sewage flows, and extraneous flows together with the peak sewage rates with due consideration being given to all the above mentioned possible flow contributions for both present and future conditions.

5. Discussion of raw sewage characteristics and the effect of any unusual or toxic substances which require special treatment. Wherever possible, the variation in sewage strength should be substantiated by data from sampling surveys or treatability studies extending over a sufficiently long period of time.

6. Discussion of proposed treatment facilities establishing the adequacy of these processes for the treatment of the specific wastewater under consideration to meet MOE effluent criteria. Ministry Regional staff should be contacted for the specific standards to be met in each case as effluent criteria can vary according to the receiving water body. Included in the discussion should be a summary of unit processes and the basic design parameters.

7. Discussion of methods of energy conservation. In this regard, reference should be made to MOE Energy Conservation Guidelines for Sewage Works.

8. Discussion of sludge management.

9. Description of proposed pumping facilities including location of the proposed pumping station and forcemain together with the elevation of the wet well liquid levels and the point of discharge of the forcemain; number and capacities of duty and standby pumps under appropriate dynamic head conditions when operating alone or in combination; discussion of possible effects on existing receiving sewers, pumping stations or treatment plants and provisions for overflows and by-passing.

10. In case of sewage treatment plants and pumping stations, the information requested in the MOE publication entitled "Guidelines for the Provision of Equipment to Handle Emergency Conditions (Power Outages) in New Sewage Works in the Province of Ontario".

11. Discussion of proposed metering, sampling and monitoring equipment. For bypass and overflow metering requirements, MOE Regional staff should be contacted.

12. In addition to the application for Approval (Air) a list of air pollution and odour sources (i.e. open tankage, boiler stacks, internal combustion engines,

incinerators, etc.) together with the distances from the points of emission to the property lines and the nearest private residence.

13. Brief discussion of the various sites for important sewage works structures from the standpoint of MOE Isolation Guidelines; land use in surrounding areas; susceptibility to flooding; effects of effluent discharges on downstream water uses; air contaminant emissions, advantages of recommended sites over other sites considered.

14. Discussion of thhe design criteria used for proposed storm and sanitary sewers including design flows.

Reference should be made to the MOE Guidelines for the Design of Sanitary Sewage Systems and Interim Guidelines for the Design of Storm Sewer Systems.

Note: The Ministry prohibits the construction of new, combined systems and discourages the extension of existing ones. Before existing combined-sewer systems are extended, it should be ascertained whether or not ultimate separation of the system is desirable.

Applications dealing with the approval of combined sewer systems should contain the information discussed under sanitary and storm sewers. In addition, the

location of all overflows of untreated sanitary sewage should be indicated on maps or exhibits accompanying the application.

15. Description of storm water treatment and management systems including methods of analysis for generating storm water flows; methods for retarding runoff, routing and regulating flows through and in the collection system; proposed methods of treatment.

    Ministry Regional staff should be contacted to establish the need for storm water management, and if required, the receiving water standards to be maintained.

16. Discussion of the planning for any future extensions and/or improvements to the system.

17. Financing of the proposed works including a breakdown of the estimated capital costs (this can be shown on the application form); estimation of the annual operating costs; proposed method of financing.

18. Plan(s) showing the following information, where pertinent:

    (a) name of municipality
    (b) suitable title

(c) scale

(d) north point

(e) datum used

(f) municipal boundaries

(g) general layout and sizes of existing and proposed storm and sanitary sewers, and location of existing and proposed major works, sources of water supply, watermains, intakes, possible points of contamination (sewage treatment plant discharges, sewer overflows, etc.)

(h) existing and proposed development in the vicinity of major works

(i) proposed general layout of major works (line diagrams and/or schematics may suffice).

INFORMATION REQUIRED FOR FINAL APPROVAL

In order to obtain final approval, a duly completed application form, final plans and specifications along with adequate supporting information are required. Final plans and specifications submitted for review are defined as those in a "Contract Document" stage. If the proposal has not received preliminary approval, the pertinent information required in the section "Information Required for Preliminary Approval" will be required along with the information requested in this section. If preliminary approval has previously been obtained, the preliminary approval number should be mentioned in the letter of submittal.

A submission for final approval which has previously received preliminary approval should contain the following information where pertinent:

Plans

General

All plans for sewage works should bear a suitable title showing the name of the municipality, name of the development or facility being serviced; and should show the scale, the north point, date, and the name of the engineer and imprint of his registration seal.

The plans should be clear and legible. They should be drawn to a scale which will permit all necessary information to be plainly shown. The size of the plans should be according to the ISO "A" series, as described in CGSB 9-GP-100. The datum used should be indicated. The location and logs of any soil test borings should be shown on the plans.

Detail plans should consist of plan views, elevations, sections and supplementary views which, together with the specifications and general layouts, provide the working information for the contract and construction of the works. Dimensions and relative elevations of structures, the location and outline form of equipment, location and size of piping, water levels and ground elevations should be shown.

Plans of Storm and Sanitary Sewers

General Plan

A comprehensive plan of the existing and proposed sewage works should be submitted for projects involving new sewage systems or substantial additions to existing systems. This plan should show the following:

(a) Geographical features including drainage areas existing and proposed streets, watercourses, contour lines at suitable intervals, municipal boundaries, bench marks assumed or used, etc.

(b) Location and size of existing and proposed sewers.

(c) Location and nature of existing sewage works structures and appurtenances affecting the proposed improvements.

(d) Location and nature of proposed sewage works structures.

Detail Plans

The proposed and existing sewers (in the vicinity of the proposed sewers) should be shown in plan and profile.

Profiles should have a horizontal scale* of not more than 1:1000 and a vertical scale* of not more than 1:100. The plan view should be drawn to a corresponding horizontal scale. Plans and profiles should show:

(a) Location of streets and sewers.

(b) Line of ground surface, shape, size, slope, material and class of pipe, length between manholes, and/or other appurtenances.

(c) Location of appurtenances such as manholes, pumping stations, overflows, etc.

(d) All known existing structures which might interfere with the proposed construction, particularly watermains, gas mains, culverts, etc.

(e) Special detail drawings, made to scale to clearly show the nature of the design, should be furnished to show the following particulars: bedding details, manholes, service connections, bridge crossings, stream crossings, supporting existing

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* Note: For tolerated continuing use of inch-feet system refer to Ontario Government Publication "Map and Plan Scales, Ratios and Paper Size".

services, trench widths, shoring, etc. For sewage forcemains additional details to be included are: typical thrust blocks, typical air and vacuum release valves, connection to the terminal manhole, surge suppressors, special connections, etc.

Plans of Sewage Works Structures
(Treatment Plants, Storm Water Retention Basins, Pumping Stations, etc.)

Site Plans

For each proposed major sewage works facility, a site plan should be submitted showing the following:

(a) The location of the major works and the extent of the area serviced by the facility, including municipal boundaries.

(b) Size of the property to be used for the sewage works structure and nature of adjoining lands.

(c) Topography of the property and adjoining lands including the elevation of the highest known flood levels.

(d) Layout and size of the existing, proposed and future plant structures on the property showing the distances from property lines,

structures, and private residences on adjoining properties.

General Layout and Detail Plans

For each proposed major sewage works facility, plans showing the following should be submitted:

(a) Schematic process flow diagrams showing all waste flow streams in treatment plants.

(b) Hydraulic profiles through treatment plants, pumping stations, etc. The profile should be accurate and of adequate vertical scale to clearly show the top of tanks, channel and trough inverts, weirs and other features which directly affect the hydraulic gradient. The hydraulic gradient should be shown for minimum and maximum flow rates. For pumping stations, maximum, overflow and minimum water levels in the wet well should be shown.

(c) Piping in sufficient detail to show the flow and the direction through the treatment plants and pumping stations including by-pass and overflow lines.

(d) Test borings and groundwater elevations within site limits.

(e) Location of all chemical feeding equipment and points of chemical addition.

(f) All appurtenances, specific structures, equipment, sources of air emissions, plant laboratory, sampling points, flow meters, etc. having any relationship to the sewage works major facilities.

(g) Location, dimensions and elevations of all existing and proposed plant facilities.

(h) Type, size, pertinent features, and manufacturer's rated capacity of all pumps, chemical feeders, blowers, motors and other mechanical devices.

(i) Adequate description of any features not otherwise covered by the specifications.

Specifications

Complete technical specifications are required for the construction of sewage works projects. In the case of minor works such as minor storm or sanitary sewer extensions, these specifications can generally be noted on the drawings themselves. With more extensive works, separate specification documents will generally be required.

The specifications should include all construction information not shown on the drawings which will be required to inform the builder in detail of the design requirements as to the quality of materials and workmanship and fabrications of the project and the type, size, strength, operating characteristics and rating of equipment, allowable leakage in sewers and pressure testing of sewers and forcemains; the complete requirements for all mechanical and electrical equipment, including machinery, valves, piping, and pipe joints; electrical apparatus, wiring, and meters; laboratory fixtures and equipment; operating tools, construction materials; filter materials; miscellaneous appurtenances; chemicals to be used; instructions for the testing of materials and equipment are necessary to meet design standards; operating tests for the completed works and component units; and programs for keeping existing works in operation without by-passing during the construction of new works.

Design Brief (Basis of Design)

A design brief should be submitted along with the plans and specifications summarizing the design criteria and presenting the design calculations used in sizing the various sewage works facilities.

A design brief should contain, but not necessarily be limited to, the following:

(a) Sanitary Sewers:

- population served (immediate and future) and per hectare (acre) population densities

- area served (immediate and future) in hectares (acres)

- per capita sewage flows

- infiltration allowances expressed in cubic meters per day per hectare (gallons per day per acre)

- industrial and commercial flows

- design flow rates - peak sewage flow, plus infiltration plus industrial flow for local, interceptor and trunk sewers

- capacity of the existing receiving sewers, pumping stations and treatment plant to receive the flow from the proposed sewers

- type of private connections to sewers - whether basement drainage, footing drainage, or roof water leaders allowed
- name of municipality

(b) suitable title

- design criteria used for the proposed sewers including the required capacity, sewer source, sewer slope, roughness coefficient, pipe capacity, flow velocity when flowing full, depth of flow and actual flow velocity at peak flow if depth of flow is less than 0.3 of the pipe diameter.

- minimum separation distance provided from watermains. Reference should be made to the MOE Guidelines for the Design of Sanitary Sewage Systems.

Where syphons are proposed, the following information should be included:

- size and number of barrels
- detailed hydraulic calculations at maximum and minimum conditions

(b) Storm Sewers:

- subdrainage areas
- design rainfall frequency in years
- design rainfall intensity
- runoff coefficients
- generated flows and capacity of sewers selected
- capacity of the receiving watercourse on existing storm sewers to accept the anticipated design flows
- design criteria as per sanitary sewers

Note: In the case of sanitary or storm sewers, the calculations and design criteria may be presented in tabular form.

(c) Sewage Pumping Stations:

- location of the proposed pumping station
- population served (immediate and future) in contributory area
- area served (immediate and future) in hectares (acres)
- per capita sewage flows
- design flow rates - peak design flow plus infiltration, plus industrial and commercial wastes for initial, design and future conditions
- type of station and facilities provided
- number and type of sewage pumps
- capacities of the pumps under appropriate dynamic head conditions when operating alone and when operating in combination
- type and Hp of motors. If variable, speed motors are to be provided, step-by-step capacities should be given at the appropriate total dynamic heads
- number of wet-well compartments and the detention times under minimum and peak design conditions
- details on any screening, grit removal or comminution facilities
- type and method of operation of the pump control equipment and alarm system
- length, size and type of material of forcemain
- velocity in the forcemain under initial, design and future conditions, together with calculations on the total dynamic head requirements of the pumps

- information requested in the MOE Guidelines for the Provision of Equipment to Handle Emergency Conditions (power outages) in New Sewage Works
- capacity of overflow and/or by-pass facilities
- miscellaneous equipment including heating and ventilating, sump pumps, flow-measuring equipment

Evidence should also be presented that the existing receiving sewers and pumping stations are adequate to receive sewage from the proposed sewage pumping stations.

When internal combustion standby power equipment is provided, an application for approval "Air" duly completed should be submitted.

(d) Sewage Treatment Plants:

- basic data on the volume and strength of the waste anticipated from the population and area to be served under the following headings:

  (a) design period
  (b) area served (acres)
  (c) population served
  (d) population density
  (e) character and quantity of sewage flow
  (f) infiltration
  (g) industrial waste

(h) storm water (combined sewers)

(i) total sewage flows (minimum, design, peak)

(j) total waste loadings

- information on the receiving stream at the point of discharge including:

  (a) name

  (b) flow data

  (c) present water use

- the requirements of effluent quality as given by the MOE Regional staff and the degree of treatment expected from the proposed works at design flow

- sanitary design calculcations of the various treatment units, i.e. velocities and surface settling rates in grit removal units; surface settling rates, solids loading rates, weir rates, in clarifiers, depths and detention times in clarifiers; anticipated BOD and SS removals in primary and final clarifiers; organic loading to aeration tanks (lagoons, biological contactors, etc.), aeration rates, type of mixing, number and capacity of blowers or mechanical aerators; return sludge capacity, number and capacity of return, waste and raw sludge pumps; detention time provided by chlorine contact tank, point of chlorine addition, dosage and mixing; capacity of

chlorination facilities; phosphorus removal, dosage points, chemical handling, etc.; primary, chemical and waste sludge volumetric production rates; volatile solids loading rate to the primary anaerobic digester and detention time, heat exchanger capacity, digester mixing, volume of gas storage; sludge retention time of aerobic digester and capacity of air supply; volume of sludge holding tanks, sludge storage available, capacity of sludge thickening and dewatering equipment and its efficiency; sludge incineration facilities, backwash and filtration rates of effluent filters; metering, sampling and monitoring equipment.

- capacity of and metering for bypass flows.

- hydraulic calculations of all process streams within the sewage treatment plant, influent works and outfall sewer under minimum and maximum flow or pumpage rates, recommended parameters for outfall diffuser section if one is required by MOE Regional staff.

- effect of recycle loads from such secondary streams as digester supernatant, heat treatment decant liquor, sludge thickeners, vacuum filters, etc.

- where liquid or filtered sludge is to be hauled away from the site for final disposal, evidence should be provided that satisfactory disposal sites are available.

- if spray irrigation systems are proposed, evidence must be provided that the soil and foliage are suitable to accept the proposed application rates without runoff.

- in cases where the proposed works is an extension to an existing plant, a summary of the facilities at the existing plant should be provided, including pertinent sanitary and hydraulic design data, as well as the adequacy of existing units in terms of current design criteria, or as an alternative derating the capacity of the existing works.

- information requested in the MOE Guidelines for the Provision of Equipment to Handle Emergency Conditions (power outages) in New Sewage Works.

- in addition to the application for approval (Air), a list of air pollution and odour sources (i.e. open tankage, boiler stack, internal combustion engines incinerator, etc.) together with the distances from the points of emission to the property line and the nearest private residence.

- where an existing plant is to be enlarged or modified a description should be provided as to the steps to be taken to provide uninterrupted treatment during construction without the need for by-passing.

INFORMATION REQUIRED FOR EXPERIMENTAL APPROVAL

Experimental approval is given in the form of terms and conditions to a certificate of final approval. The information required for final approval must therefore be submitted and in addition the following information will be necessary.

1. All existing data pertaining to the proposed process, equipment or material.

2. The results of any testing programs which have been undertaken by independent testing agencies, research foundations, universities, etc.

3. A listing of any known full-scale applications of the proposal giving a description of the type of application and the name and address of the person who could be contacted in regard to the application.

4. A discussion of the effects which failure of the proposal would cause and what precautions would be

taken to preclude a health hazard or pollution as a result of the failure.

5. A discussion of how the proposal could be modified or replaced with a conventional system if failure occurred and how such a modification or replacement would be paid for.

6. A description of the monitoring, testing and reporting program which the applicant would undertake during the experimental period.

7. The duration of the proposed experiments.

FUNCTIONS OF THE MINISTRY IN APPRAISING APPLICATIONS AND ISSUING APPROVALS

Applications are reviewed by the Environmental Approvals Branch from the public health, protection of the environment, and functional point of view based upon the Ministry's water quality objectives, regulations and accepted principles of sanitary engineering. Features which are deemed to be inconsistent with the design period of the works, or its satisfactory and safe operation, may be brought to the attention of the applicant. In general, the structural, mechanical and electrical details are of concern only to the extent that they affect the functioning of the works.

Applications are not reviewed with respect to other Provincial or Federal by-laws, codes, regulations or statutes which may pertain to sewage works.

Where, in the opinion of the Director, it is in the public interest to do so, the Director may refuse to grant his approval or grant his approval on such terms and conditions as he deems necessary. In such cases, the Applicant has the right to appeal to the Environmental Appeal Board and the Director within 15 days after receipt of the conditional certificate of approval or notice of refusal.

RESPONSIBILITY OF THE OWNER IN APPLYING FOR APPROVAL

Before making an application to the Ministry, the owner or his agent should familiarize himself with those sections of The Ontario Water Resources Act pertaining to the approval and operation of sewage works.

In signing the application form, the applicant acknowledges awareness of other statutes related to sewage works; agrees that no changes in, or deviations from the approved plans or specifications will be made except with the consent and approval of the Director, Environmental Approvals Branch; and agrees, if requested, to submit "as built" plans and cost figures to the Director upon completion of the project.

The approval of Ministry does not relieve the owner or his agent from his responsibility to submit the necessary material to other authorities for their approval. Also, as indicated in the previous section, the appraisal and approval of plans and specifications by the Ministry does not release the owner of any liability for personal or property damage resulting from the proposed sewage works. The applicant is, therefore, strongly advised, if he himself is not qualified, to obtain the services of someone who is qualified in the design of sewage works systems and who is familiar with all the necessary approval requirements.

As can be seen from the previous sections, the information required with an application for approval by this Ministry can be quite extensive. The more complete and comprehensive are the plans, specifications and design information, the more rapidly they can be assessed and approved. This will save the applicant as well as this Ministry unnecessary delays.

PROCEDURES TO BE FOLLOWED BY THE APPLICANT IN REQUESTING APPROVAL

Application Form

All requests for approval of sewage works are to be submitted along with the Ministry of the Environment application form MOE 0730. In addition, for any facilities

such as pumping stations with standby power equipment which results in atmospheric emissions, the applicant should complete MOE Form 1131 Application for a Certificate of Approval (AIR). These application forms can be obtained from the Municipal and Private Approvals Section, Environmental Approvals Branch, Ministry of the Environment, 135 St. Clair Avenue West, Toronto, Ontario, M4V 1P5. If more convenient, the forms may also be obtained from the Regional and District offices listed in Appendix A.

The application form should be filled in where pertinent giving all the necessary background information. The completed form gives the following information:

(a) type of approval being requested;
(b) description of works to be constructed;
(c) location of works;
(d) signatures of applicant, engineer, municipal authority and operating authority;
(e) cost summary;
(f) financing method;
(g) scheduling of construction;
(h) Ministry of Housing File number (T-number) and registered plan number;
(i) names and addresses of those who are to receive approval certificates;
(j) detailed location description of proposed sewers;
(k) type of sewers;
(l) proposed municipal by-law description.

INSTRUCTIONS FOR COMPLETING APPLICATION FORM (SEWAGE WORKS)

The applicant must be the owner of the proposed works or a person authorized by him. The applicant should see that all pertinent information requested on the application is provided, including the location description, cost information and the co-signatures. The shaded areas of the application form are for office use only.

PAGE TWO

The information and signatures required on Page 2 constitute the formal request for approval of the works to be constructed, extended, altered or replaced under The Ontario Water Resources Act, 1970, Section 42.

The name and address of the owner on whose behalf the application is made should be clearly shown. The applicant is expected to indicate the type of approval being requested and give a general description of the type, capacity and location of the proposed works.

The co-signatures required along with the applicant's include the signature and seal of the engineer who has prepared the engineering documents. If the applicant is not the municipality in which the works are to be constructed, the signature of the municipal clerk is required. This is to establish the municipality's general approval of the

proposed works and does not necessarily imply technical approval and/or responsibility for the works. If the applicant will not be the operating authority upon completion of the works, the signature of an authorized official of the operating authority is required.

PAGE THREE

Page 3 of the application form provides for a breakdown of the total estimated cost into a number of categories. Each section should be completed where applicable and where the cost can be reasonably estimated. Final cost figures, when requested, should be presented in the same manner upon completion of the project. The method of financing and the schedule for commencing and constructing the works are to be provided.

If the proposal concerns a subdivision for which there is a Ministry of Housing File number (T-number) or Registered Plan number, this number should be indicated on the application form.

PAGE FOUR

The applicant should indicate the type (sanitary or storm) and location description of sanitary and storm sewers.

The sewer location description given on the last page of the application form must be completed accurately since this description is used in the preparation of the approval certificate.

If the applicant is a municipal corporation financing the work by debentures under The Municipal Act, the bottom part of the page should be used to give the proposed by-law description, if available. This will enable staff of the Ministry to advise the municipality where apparent discrepancies in the two descriptions may result in enquiries from the Ontario Municipal Board when the project is before the Board.

The following guidelines should be used by the applicant when preparing sewer location descriptions:

(a) The works to be approved should be so described that they can be located in the field without reference to the engineering drawings.

(b) The description used should give the actual locations of sewers, not the area to be serviced. If the municipal by-law description differs greatly from the sewers location description, the space provided at the bottom of page 4 of the application form should be used to give the by-law description.

(c) Terminal points of proposed sanitary and storm sewers should be related with respect to distance from the nearest intersecting streets rather than being referenced with respect to lot numbers, street numbers, etc. Unless otherwise stated, it will be assumed that distances given, such as "approximately 150 meters east of Jane Street", refer to distances from the centreline of Jane Street.

Hydro or railway right-of-ways may also be used to reference the terminal points of sewermains if they have been shown on the final plans.

Manhole numbers, chainages, the house numbers are not acceptable means of describing the terminal point of the works. Such terminology as "to existing sanitary sewer manhole" is not acceptable.

(d) Each specific street, easement, or right-of-way traversed by the sewer must be shown separately on the location description. If street names have not been established at the time of submission, the applicant is required to provide his own suitable designation for each street on both the plans and location description portion of the application form.

(e) Since the descriptions will be scaled from drawings, it is not expected that the distances given will be exact. Some variation is expected when construction of the works is undertaken, but the variation should not exceed 25 meters. With greater variations, it is assumed that the works are not being constructed as shown on the plans submitted for approval, and a revised submission should be made.

(f) In the event that two sanitary or two storm sewers constructed on the same street, they should be described separately through the use of terms such as "on the north side" and "on the south side".

(g) The expressions "cul-de-sac" or "end of court" may be used to describe the terminal point of sewers built on streets that end in a turning circle around which lots are to be developed.

(h) General description of sewers may be used where it is inconvenient to use detailed descriptions. Examples of this would include services relocated due to highway construction and watercourse improvements in urban areas. Similarly, water distribution systems on private property such as systems servicing tent and trailer camps, golf courses, etc., where the watermains do not follow roadways, may be given in general descriptions.

APPENDIX A

D. MINISTRY OF THE ENVIRONMENT (Regional Directors)

Regional Director
Ministry of the Environment
Central Region
4th fl., 7 Overlea Blvd.
Toronto, Ontario
M4H 1A8 (416) 424-3000

Regional Director
Ministry of the Environment
Sudbury Regional Office
Northeast Region
11th floor, 199 Larch St.
Sudbury, Ontario
P3E 5P9 (705) 675-4501

Regional Director
Ministry of the Environment
Thunder Bay Regional Office
Northwest Region
Box 5000, 3rd Fl.
435 James St. S.
Thunder Bay, Ontario (807) 475-1205

Regional Director
Ministry of the Environment
Kingston Regional Office
Southeast Region
Box 820, 133 Dalton Ave.
Kingston, Ontario
K7L 4X6 (613) 549-4000

Regional Director
Ministry of the Environment
London Regional Office
Southwest Region
985 Adelaide St. S.
London, Ontario
N6E 1V3 (519) 661-2200

Regional Director
Ministry of the Environment
Hamilton Regional Office
West Central Region
Box 2112, 12th fl.
119 King St. West
Hamilton, Ontl
L8N 3Z9 (416) 521-7640

D. MINISTRY OF THE ENVIRONMENT
(Manager, Technical Support)

Manager, Technical Support
Ministry of the Environment
Central Region
4th fl., 7 Overlea Blvd.
Toronto, Ontario
M4H 1A8 (416) 424-3000

Manager, Technical Support
Ministry of the Environment
Sudbury Regional Office
Northeast Region
11th floor, 199 Larch St.
Sudbury, Ontario
P3E 5P9 (705) 675-4501

Manager, Technical Support
Ministry of the Environment
Thunder Bay Regional Office
Northwest Region
Box 5000, 3rd Fl.
435 James St. S.
Thunder Bay, Ontario (807) 475-1205

Manager, Technical Support
Ministry of the Environment
Kingston Regional Office
Southeast Region
Box 820, 133 Dalton Ave.
Kingston, Ontario
K7L 4X6 (613) 549-4000

Manager, Technical Support
Ministry of the Environment
London Regional Office
Southwest Region
985 Adelaide St. S.
London, Ontario
N6E 1V3 (519) 661-2200

Manager, Technical Support
Ministry of the Environment
Hamilton Regional Office
West Central Region
Box 2112, 12th fl.
119 King St. West
Hamilton, Ontl
L8N 3Z9 (416) 521-7640

D. MINISTRY OF THE ENVIRONMENT (District Offices and Sub-Offices)

District Officer
Ministry of the Environment
Toronto District Office
4th fl., 7 Overlea Blvd.
Toronto, Ontario
M4H 1A8 (416) 424-3000

District Officer
Ministry of the Environment
Barrie District Office
12 Fairview Rd.
Barrie, Ontario
L4N 4P3 (705) 726-1730

District Officer
Ministry of the Environment
Halton-Peel District Office
1226 White Oaks Blvd.
Oakville, Ontario
L6H 2B9 (416) 844-5747

District Officer
Ministry of the Environment
Muskoka-Haliburton District Office
Gravenhurst Plaza General Delivery
Gravenhurst, Ontario
POC 1GO (705) 687-3408

District Officer
Ministry of the Environment
Peterborough District Office
139 George St. N.
Peterborough, Ontario
K9J 3G6 (705) 743-2972

District Officer
Ministry of the Environment
York-Durham District Office
4th fl., 7 Overlea Blvd.
Toronto, Ontario
M4H 1A8 (416) 424-3000

District Officer
Ministry of the Environment
North Bay District Office
Northgate Plaze, 1500 Fisher St.
North Bay, Ontario
P1B 2H3 (705) 476-1001

District Officer
Ministry of the Environment
Parry Sound Sub-Office
74 Church Street
Parry Sound, Ontario
P2A 1Z1 (705) 746-2139

District Officer
Ministry of the Environment
Sudbury District Office
11th, 199 Larch St.
Sudbury, Ontario
P3E 5P9 (705) 675-4501

District Officer
Ministry of the Environment
Timmins District Office
83 Algonquin Blvd. W.
Timmins, Ontario
P4N 2R4 (705) 268-3222

District Officer
Ministry of the Environment
Kenora District Office
Box 5150, 808 Robertson St.
Kenora, Ontario
P9N 1X9 (807) 468-5578

District Officer
Ministry of the Environment
Thunder Bay District Office
Box 5000, 3rd Fl.
435 James St. S.
Thunder Bay, Ontario (807) 475-1205

District Officer
Ministry of the Environment
Belleville Sub-Office
15 Victoria Avenue
Belleville, Ontario
K8N 1Z5 (613) 962-9208

District Officer
Ministry of the Environment
Cornwall District Office
2th fl., 4 Montreal Rd.
Cornwall, Ontario
K6H 1B1 (613) 933-7402

District Officer
Ministry of the Environment
Kingston District Office
Box 820, 133 Dalton Ave.
Kingston, Ontario
K7L 4X6 (613) 549-4000

District Officer
Ministry of the Environment
Ottawa District Office
2378 Holly Lane
Ottawa, Ontario
K1V 7P1 (613) 521-3450

District Officer
Ministry of the Environment
Pembroke Sub-Office
1000 MacKay St.
Pembroke, Ontario
K8B 1A3 (613) 732-3643

District Officer, Abatement South
Ministry of the Environment
London Regional Office
985 Adelaide St. S.
London, Ontario
N6E 1V3 (519) 661-2200

District Officer, Abatement South
Ministry of the Environment
London Regional Office
985 Adelaide St. S.
London, Ontario
N6E 1V3 (519) 661-2200

District Officer
Ministry of the Environment
Chatham Sub-Office
c/o Min. Agriculture & Food
P.O. Box 726, 435 Grand Ave. W.
Chatham, Ontario
N7M 5L1

District Officer
Ministry of the Environment
Clinton Sub-Office
c/o Min. Agriculture & Food
P.O. Box 688
Clinton, Ontario
NOM 1LO (519) 482-3428

District Officer
Ministry of the Environment
Ownen Sound District Office
1180-20th
Owen Sound Ontario
N4K 6H6 (519) 371-2901

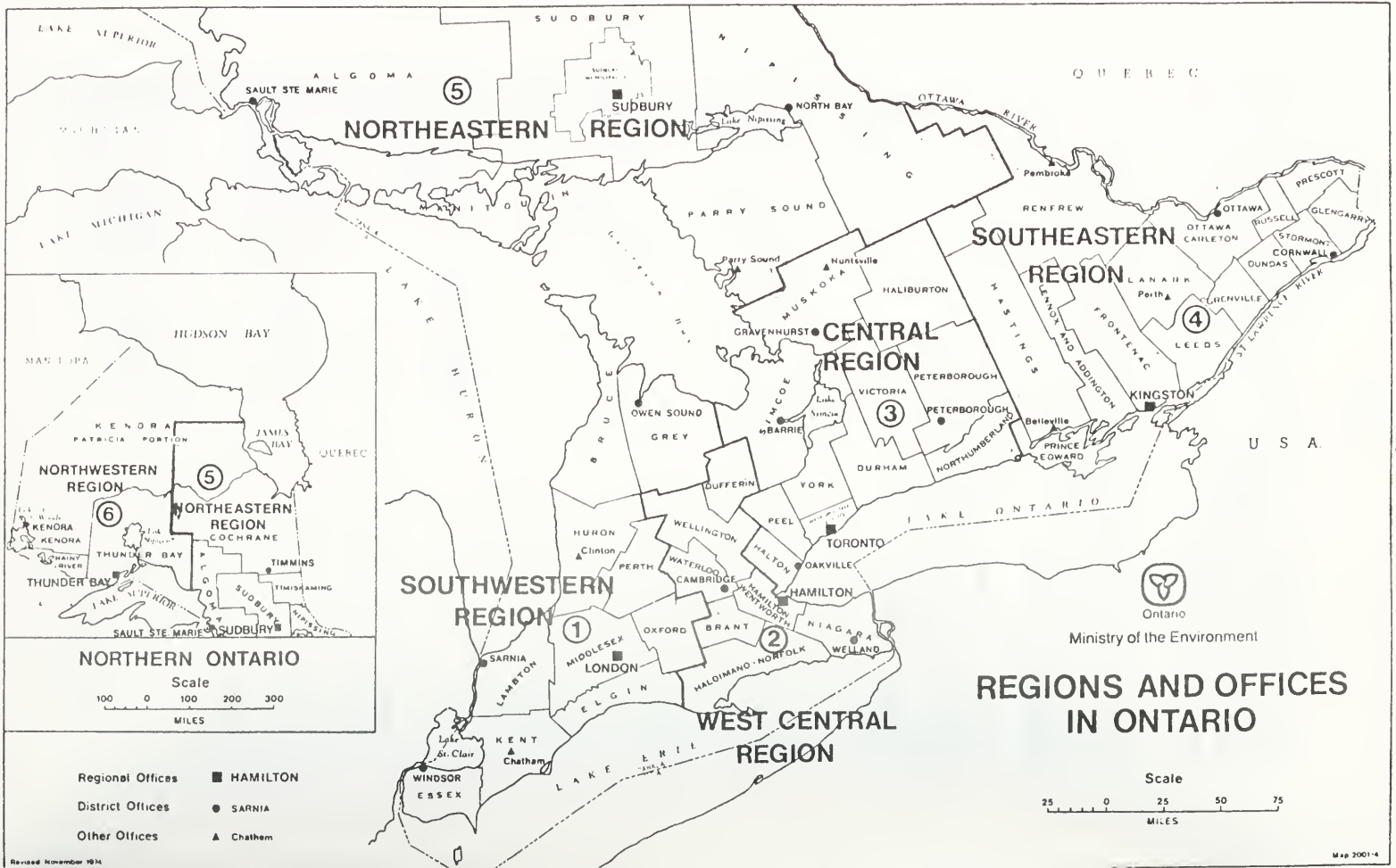
District Officer
Ministry of the Environment
Sarnia District Office
Suite 109, 265 N Front St.
Sarnia, Ontario
N7T 7X1 (519) 336-4030

District Officer
Ministry of the Environment
Windsor District Office
6th fl., 250 Windsor Ave.
Windsor, Ontario
N9A 6V9 (519) 254-5129

District Officer
Ministry of the Environment
Cambridge District Office
Box 219, 400 Clyde Road
Cambridge, Ontario
N1R 5T8 (416) 653-1511

District Officer
Ministry of the Environment
Hamilton District Office
Box 2112, 9th fl., 119 King St. W.
Hamilton, Ontario
L8N 3Z9 (416) 521-7640

District Officer
Ministry of the Environment
Welland District Office
637-641 Niagara St. North
Welland, Ontario
L3C 1L9 (416) 384-9896


NORTHEASTERN REGION
5
SUDBURY
SAULT STE MARIE
ALGOMA
NORTH BAY
PARRY SOUND
Parry Sound
Huntsville
MUSKOKA
HALIBURTON
NORTHWESTERN REGION
6
KENORA
PATRICIA PORTION
THUNDER BAY
TIMMINS
COCHRANE
TIMISKAMING
NIPISSING
NORTHERN ONTARIO
Scale
100 0 100 200 300
MILES
CENTRAL REGION
3
GRAVENHURST
BARRIE
OWEN SOUND
GREY
BRUCE
SIMCOE
VICTORIA
PETERBOROUGH
SOUTHEASTERN REGION
4
RENFREW
Pembroke
OTTAWA
OTTAWA CARLETON
PRESCOTT
RUSSELL
GLENGARRY
STORMONT
CORNWALL
DUNDAS
LANARK
Perth
GRENVILLE
LEEDS
FRONTENAC
LENNOX AND ADDINGTON
HASTINGS
PRINCE EDWARD
Belleville
KINGSTON
ST LAWRENCE RIVER
QUEBEC
U S A.
LAKE ONTARIO
DURHAM
NORTHUMBERLAND
YORK
PEEL
TORONTO
DUFFERIN
HURON
WELLINGTON
PERTH
Clinton
WATERLOO
CAMBRIDGE
HALTON
OAKVILLE
HAMILTON
SOUTHWESTERN REGION
1
2
OXFORD
BRANT
NIAGARA
WELLAND
MIDDLESEX
LONDON
SARNIA
LAMBTON
ELGIN
HALDIMAND-NORFOLK
WEST CENTRAL REGION
KENT
Chatham
Lake St. Clair
WINDSOR
ESSEX
LAKE ERIE
LAKE HURON
LAKE MICHIGAN
LAKE SUPERIOR
OTTAWA RIVER
Regional Offices ■ HAMILTON
District Offices ● SARNIA
Other Offices ▲ Chatham
Revised November 1974
Ontario
Ministry of the Environment
REGIONS AND OFFICES IN ONTARIO
Scale
25 0 25 50 75
MILES
Map 2001-4

Ministry of the Environment
Ontario

Ministère de l'Environnement

Application for the Approval of Sewage Works

Demande d'autorisation de construction d'ouvrages d'épuration des eaux usées

Ministry Use Only
Réservé au ministère
Number
Numéro

Municipality
Municipalité

All information should be supplied in duplicate. One copy should be mailed to:

Ministry of the Environment
Director, Environmental Approvals and Project Engineering Branch
135 St. Clair Avenue West
Toronto, Ontario
M4V 1P5

and the second copy should be mailed to the local district office of the Ministry.

Présenter tous les documents en double exemplaire. Poster une copie au:

Ministère de l'Environnement
Directeur des approbations environnementales et des services d'ingénierie
135 ouest, avenue St. Clair
Toronto (Ontario)
M4V 1P5

et la seconde copie au bureau local de district du ministère.

Important

The installation of sewage works shall not be undertaken without the approval of the Director, Environmental Approvals and Project Engineering Branch, of the Ministry of the Environment. Such approval will be made through the issuance of a certificate upon satisfactory compliance by the applicant with the policies and requirements of the Ministry.
This form must be accompanied by the information requested in **A Guide on Applying for the Approval of Sewage Works.**

Important

Aucun ouvrage d'épuration des eaux usées ne peut commencer à être construit sans l'autorisation du directeur des approbations environnementales et des services d'ingénierie du ministère de l'Environnement. Le directeur donne son autorisation en délivrant un certificat après s'être assuré que le demandeur s'est conformé aux politiques et exigences du ministère.
La présente formule doit être accompagnée des renseignements demandés dans le ***Guide pour les demandes d'autorisation de construction d'ouvrages d'épuration des eaux usées.***

Description of Works
Description des ouvrages

Application is hereby made to the Director *for*
Le demandeur adresse au directeur par
la présente une demande d'autorisation

Approval to Construct (Describe type of sewers, pumping stations and miscellaneous structures.)
de construire (décrire le type d'égouts, de postes de pompage et d'ouvrages divers).

And Sewage Treatment Works (Describe type and capacity of major works.)
ainsi que les ouvrages d'épuration des eaux usées suivants (décrire le type et la capacité des principaux ouvrages).

Location of Proposed Sewage Works
Emplacement des ouvrages

Lot, Concession, Municipality & County, District or Region
Lot, concession, municipalité et comté, district ou région

Works will Outlet to (Sewer system, name of receiving stream or lake.)
Les eaux traitées se déverseront dans (réseau d'égouts ou nom du cours d'eau ou du lac récepteur).

This application is made under the provisions of Section 24, Ontario Water Resources Act, R.S.O. 1980, and such other statutes as relate to sewage works.

The applicant agrees that no changes in or deviations from the approved plans and specifications will be made except with the consent and approval of the Director, and agrees, if requested, to submit as-built drawings and cost figures to the Director upon completion of the project.

La présente demande est faite aux termes des dispositions de l'article 24 de la Loi sur les ressources en eau de l'Ontario, L.R.O. de 1980, et des autres lois qui se rapportent aux ouvrages d'adduction et de purification de l'eau.

Le demander s'engage à n'apporter aucune modification aux plans et cahier des charges approuvés, sauf s'il obtient le consentement et l'autorisation du directeur, et s'engage, sur demande, à remettre les plans des ouvrages tels qu'ils ont été construits ainsi que la ventilation détaillée du coût de construction au directeur à la fin des travaux.

Signatures Required
Signatures requises

Applicant
Demandeur

Signature *Signature*	Name (Print or Type) *Nom (en lettres moulées)*	Date *Date*
Mailing Address *Adresse*		Telephone *N° de téléphone*

Municipality (If not applicant)
Municipalité *(À remplir si le demandeur n'est pas la municipalité.)*

Signature *Signature*	Name & Title of Municipal Authority *Nom et titre du responsable municipal*	Date *Date*
Mailing Address *Adresse*		Telephone *N° de téléphone*

Engineer
Ingénieur
Eng. Documents Certified by (signature)
Préparation des documents d'ingénierie certifiés par (signature de l'ingénieur autorisé)

Name of Engineer or Firm *Nom de l'ingénieur ou de la firme d'ingénierie*	Date *Date*
Mailing Address *Adresse*	Telephone *N° de téléphone*

Operating Authority (If not applicant)
Exploitant *(À remplir si l'exploitant n'est pas le demandeur.)*

Signature *Signature*	Name of Operating Authority *Nom de l'exploitant*	Date *Date*
Mailing Address *Adresse*		Telephone *N° de téléphone*

Cost Summary
Sommaire des coûts

Sewers and Appurtenances *Égouts et accessoires*	$
Building Sewer Connections *Raccords de branchements d'égouts*	$
Pumping Stations and Forcemains *Postes de pompage et conduites de refoulement*	$
Treatment Works and Outfalls *Usines d'épuration et exutoires*	$
Engineering and Contingencies *Ingénierie et imprévus*	$
Land Charges *Frais fonciers*	$
Total ***Total***	$

Financing *Financement* Payment by (cash, debentures, loans, etc.) *Paiement (comptant, débentures, emprunts, etc.)*	Source of Financing (municipal, private, government) *Source de financement (municipal, privé, gouvernemental)*
Scheduling *Calendrier* Construction Start Date *Date de début des travaux*	Construction Period (years, months) *Durée des travaux (années, mois)*
File Number of Ministry of Municipal Affairs and Housing ***Numero de dossier du ministère des Affaires municipales et du Logement***	**or Registered Plan Number** (if applicable) ***ou numéro de plan enregistré (s'il y a lieu)***

The certificate of approval will be issued to the applicant. Copies will be sent to the clerks of any affected municipalities which are not applicants. List names and addresses below for any other recipients.

Le certificat d'autorisation sera délivré au demandeur et une copie du certificat envoyée aux secrétaires de toutes les municipalités intéressées qui n'ont pas signé la demande. Indiquer ci-dessous les noms et adresses de tout autre destinataire.

Ministry Use Only ***Réservé au ministère*** Application Checked by *Demande vérifiée par*	☐ **Application Recommended for Approval** ***Autorisation de la demande recommandée*** Supervisor, Environmental Approvals Section — Date *Superviseur, Section des approbations environnementales* — *Date*

Sanitary and Storm Sewer Location(s)
Emplacement des égouts séparatifs et pluviaux

Plan Number *Nº de plan*	Type of Sewer *Type d'égout*	Street or Easement on which Sewer is to be constructed *Rue ou servitude (dans laquelle l'égout doit être construit)*	From (location with respect to nearest intersecting street) *De (intersection la plus proche)*	To (location with respect to nearest intersecting street) *À (intersection la plus proche)*